

## ABSTRACT OF THE DISCLOSURE

A first estimator 13 estimates the position of a head based on a VCM driving signal  $u_1$  and a voltage signal  $V_a$  output from a VCM 6 to output a first head position estimation signal  $x_{1est}$ . The first estimator 13 estimates the disturbance acting on a head supporting mechanism 8 to output a disturbance estimation signal  $\tau_{dest}$ . A second estimator 15 estimates the displacement of the head based on a control signal  $c_2$  for a fine adjustment actuator 7 to output a displacement estimation signal  $x_{2est}$ . The first head position estimation signal  $x_{1est}$  and the displacement estimation signal  $x_{2est}$  are added together to obtain a second head position estimation signal  $x_{est}$ . A position error signal  $e$  is generated using a head position signal  $x$  obtained by detecting the servo information and the second head position estimation signal  $x_{est}$ . A disturbance compensator 10 synthesizes a VCM control signal  $c_1$  with the disturbance estimation signal  $\tau_{dest}$  to generate the VCM driving signal  $u_1$ .